

## **RAW SEQUENCE LISTING**

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Information Center (STIC) no errors detected.**

Application Serial Number: 161768,9S1  
Source: IFUWO  
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IFWO

**RAW SEQUENCE LISTING**  
**PATENT APPLICATION: US/10/768,951**

**DATE: 03/18/2005**  
**TIME: 10:39:32**

**Input Set : A:\SEQLIST.txt**  
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3 <110> APPLICANT: COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH  
 5 <120> TITLE OF INVENTION: STABLE GENE VARIANTS OF LIPASES  
 7 <130> FILE REFERENCE: 71914  
 9 <140> CURRENT APPLICATION NUMBER: US 10/768,951  
 10 <141> CURRENT FILING DATE: 2004-01-29  
 12 <160> NUMBER OF SEQ ID NOS: 12  
 14 <170> SOFTWARE: PatentIn version 3.1  
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 33 Ser Phe Asn Phe Ala Gly Ile Lys Ser Tyr Leu Val Ser Gln Gly Trp  
 34 20 25 30  
 37 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr  
 38 35 40 45  
 41 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu  
 42 50 55 60  
 45 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly  
 46 65 70 75 80  
 49 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys  
 50 85 90 95  
 53 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly  
 54 100 105 110  
 57 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser  
 58 115 120 125  
 61 Ile Tyr Ser Ser Ala Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu  
 62 130 135 140  
 65 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu  
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 69 Tyr Ser Ser Gln Val Asn Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly  
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 78 <211> LENGTH: 181  
 79 <212> TYPE: PRT

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 95 20 25 30  
 98 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr  
 99 35 40 45  
 102 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu  
 103 50 55 60  
 106 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly  
 107 65 70 75 80  
 110 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys  
 111 85 90 95  
 114 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly  
 115 100 105 110  
 118 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser  
 119 115 120 125  
 122 Ile Tyr Ser Ser Ala Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu  
 123 130 135 140  
 126 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu  
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 156 20 25 30  
 159 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr  
 160 35 40 45  
 163 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu  
 164 50 55 60  
 167 Asp Glu Thr Gly Val Lys Lys Val Asp Ile Val Ala His Ser Met Gly  
 168 65 70 75 80

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 176 100 105 110  
 179 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser  
 180 115 120 125  
 183 Ile Tyr Ser Ser Asp Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu  
 184 130 135 140  
 187 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu  
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 217 20 25 30  
 220 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr  
 221 35 40 45  
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 225 50 55 60  
 228 Asp Glu Thr Gly Thr Lys Lys Val Asp Ile Val Ala His Ser Met Gly  
 229 65 70 75 80  
 232 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys  
 233 85 90 95  
 236 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly  
 237 100 105 110  
 240 Lys Ala Pro Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser  
 241 115 120 125  
 244 Ile Tyr Ser Ser Ala Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu  
 245 130 135 140  
 248 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu  
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 252 Tyr Ser Ser Gln Val Tyr Ser Leu Ile Lys Glu Gly Leu Asn Gly Gly  
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 256 Gly Gln Asn Thr Asn  
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 260 <210> SEQ ID NO: 5  
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 278 20 25 30  
 281 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr  
 282 35 40 45  
 285 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu  
 286 50 55 60  
 289 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly  
 290 65 70 75 80  
 293 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys  
 294 85 90 95  
 297 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly  
 298 100 105 110  
 301 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser  
 302 115 120 125  
 305 Ile Tyr Ser Ser Asp Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu  
 306 130 135 140  
 309 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu  
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 338 Ser Phe Asn Phe Ala Gly Ile Lys Ser Tyr Leu Val Ser Gln Gly Trp  
 339 20 25 30  
 342 Ser Arg Asp Lys Leu Tyr Ala Val Asp Phe Trp Asp Lys Thr Gly Thr  
 343 35 40 45  
 346 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu  
 347 50 55 60  
 350 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly

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359           100         105         110
362 Lys Ala Pro Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
363           115         120         125
366 Ile Tyr Ser Ser Asp Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
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370 Asp Gly Ala Arg Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
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404           35          40          45
407 Asn Tyr Asn Asn Gly Pro Val Leu Ser Arg Phe Val Gln Lys Val Leu
408           50          55          60
411 Asp Glu Thr Gly Ala Lys Lys Val Asp Ile Val Ala His Ser Met Gly
412 65           70          75          80
415 Gly Ala Asn Thr Leu Tyr Tyr Ile Lys Asn Leu Asp Gly Gly Asn Lys
416           85          90          95
419 Val Ala Asn Val Val Thr Leu Gly Gly Ala Asn Arg Leu Thr Thr Gly
420           100         105         110
423 Lys Ala Leu Pro Gly Thr Asp Pro Asn Gln Lys Ile Leu Tyr Thr Ser
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427 Ile Tyr Ser Ser Ala Asp Met Ile Val Met Asn Tyr Leu Ser Arg Leu
428           130         135         140
431 Asp Gly Ala Ser Asn Val Gln Ile His Gly Gly His Ile Gly Leu Leu
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VERIFICATION SUMMARY DATE: 03/18/2005  
PATENT APPLICATION: US/10/768,951 TIME: 10:39:33

Input Set : A:\SEQLIST.txt  
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